STATE OF GEORGIA
TIER 2 TMDL IMPLEMENTATION PLAN REVISION _1_

Whitewater Creek
Flint River Basin
Taylor County

I. INTRODUCTION

Total Maximum Daily Load (TMDL) Implementation Plans are platforms for evaluating and tracking water quality protection and restoration. These plans have been designed to accommodate continual updates and revisions as new conditions and information warrant. In addition, field verification of watershed characteristics and listing data has been built into the preparation of the plans. The overall goal of the plans is to define a set of actions that will help achieve water quality standards in the state of Georgia.

This implementation plan addresses the general characteristics of the watershed, the sources of pollution, stakeholders and public involvement, and education/outreach activities. In addition, the plan describes regulatory and voluntary practices/control actions (*management measures*) to reduce pollutants, milestone schedules to show the development of the management measures (*measurable milestones*), and a monitoring plan to determine the efficiency of the management measures.

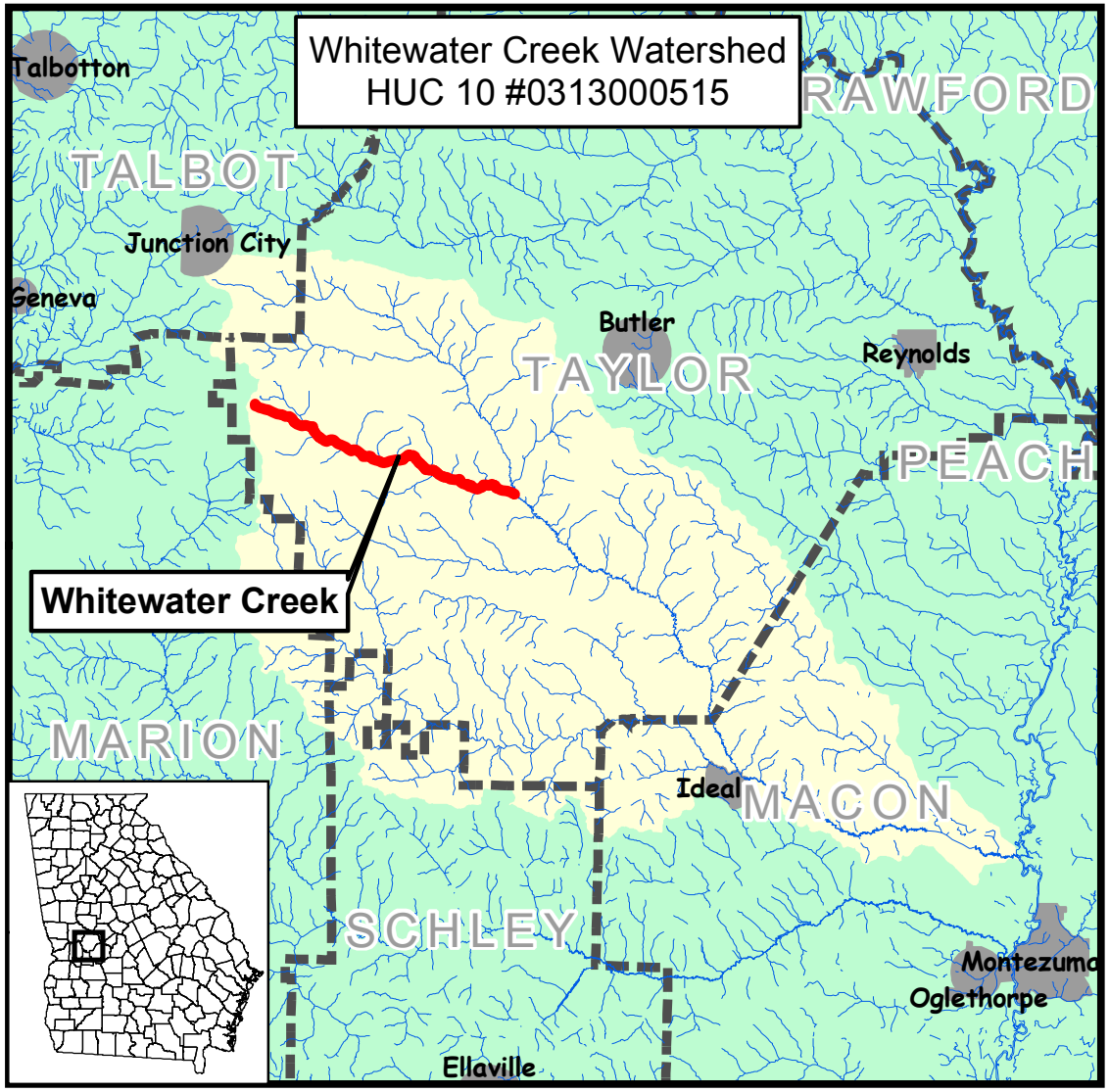


Table 1. IMPAIRMENTS

IMPAIRED STREAM SEGMENT	IMPAIRED SEGMENT LOCATION	IMPAIRMENT
Whitewater Creek	Headwaters to Little Whitewater Creek	Biota (sediment)
Little Whitewater Creek (aka Big Whitewater Creek) *	Black Creek to Whitewater Creek	Biota (sediment)
Rambulette Creek *	Headwaters to Whitewater Creek	Biota (sediment)
Whitewater Creek *	Cedar Creek to Flint River	PH
Whitewater Creek *	Big Whitewater Creek to Cedar Creek	pH

*** Plan will be written by GA EPD**

II. GENERAL INFORMATION ABOUT THE WATERSHED

Write a narrative describing the watershed, HUC 10# 0313000515. Include an updated overview of watershed characteristics. Identify new conditions and verify or correct information in the TMDL document using the most current data. Include the size and location of the watershed, political jurisdictions, and physical features which could influence water quality. Describe the source and date of the latest land cover/use for the watershed. Describe and quantify major land uses and activities which could influence water quality. See the instructions for more information on what to include.

The referenced HUC covers approximately 147,000 acres;[1] the overwhelming majority of which is in forest or agriculture. Located in five counties, it extends in a southeasterly direction from its northernmost point at Junction City (Talbot) through the southwest half of Taylor, barely crossing county lines into Marion and Schley, and terminating in Macon County where it serves as the drainage basin for the City of Ideal before discharging into the Flint River. Very limited development has occurred in this rural area during the past ten years. Development has consisted almost entirely of single-family residential housing and some poultry housing construction. No single-site development of significance could be identified. The City of Ideal, the only incorporated community in the watershed, was credited by the 2000 Census with a resident population of 520.

The impaired segment of Whitewater Creek originates on the northwest boundary of the larger, ten-digit HUC, at Georgia Highway 90 south of the Taylor/Talbot County line. The sub-basin (HUC 031300051502) in which the impairment is located is approximately 13,000 acres[2] in size and is the subject of the balance of this document. Light, sandy soil makes much of this area among the least fertile in the county, and in conjunction with steep slopes common in the upper third of the basin exacerbates erosion and sedimentation. The impaired segment (6 miles) extends the full length of the basin. Land use distribution in this basin is as follows:

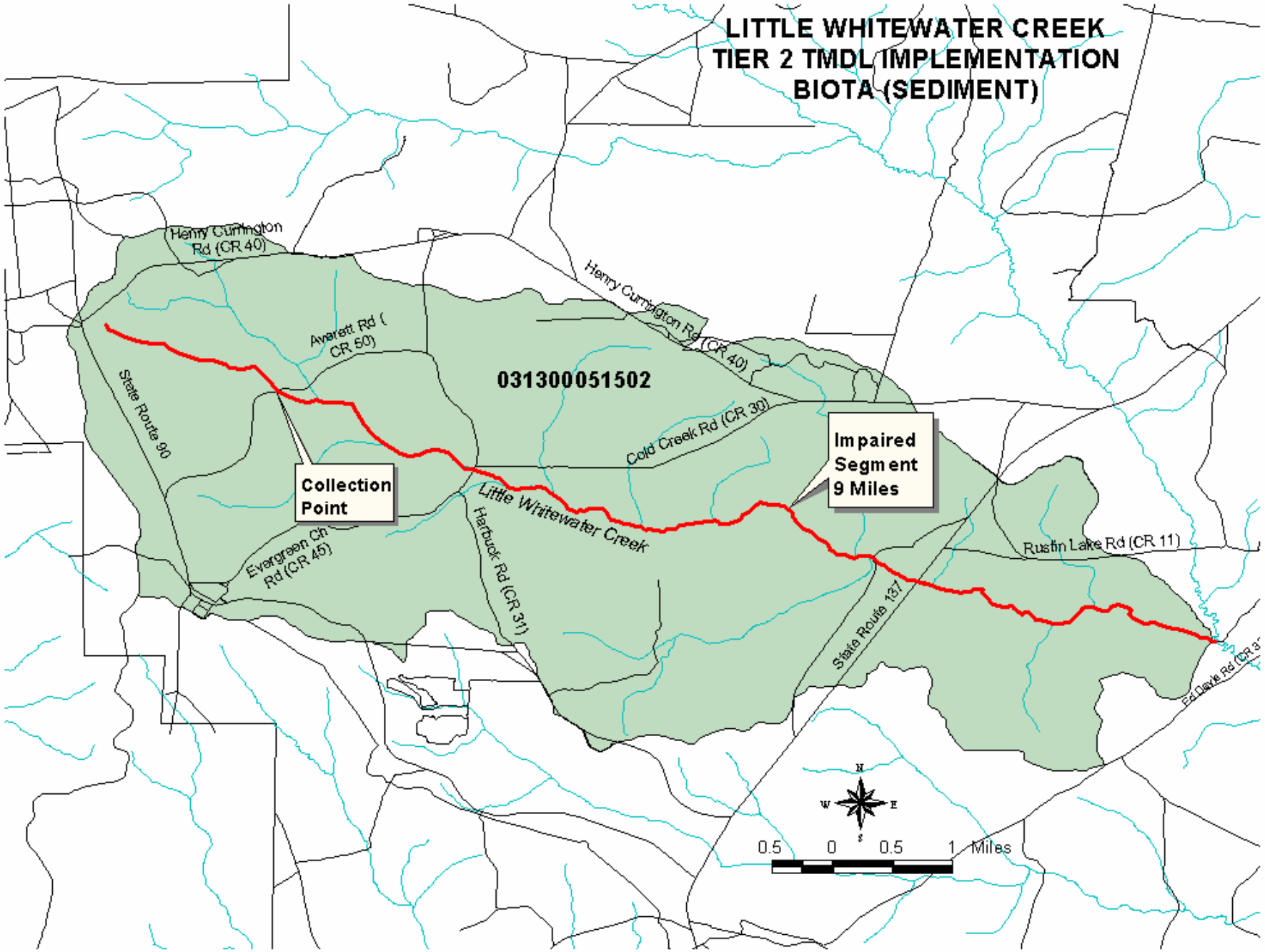
Whitewater Creek Land Use Distribution				
Forest	Row Crop Agriculture	Pasture/Hay	Residential/Developed	Other*
62%	21%	6%	<1%	10%

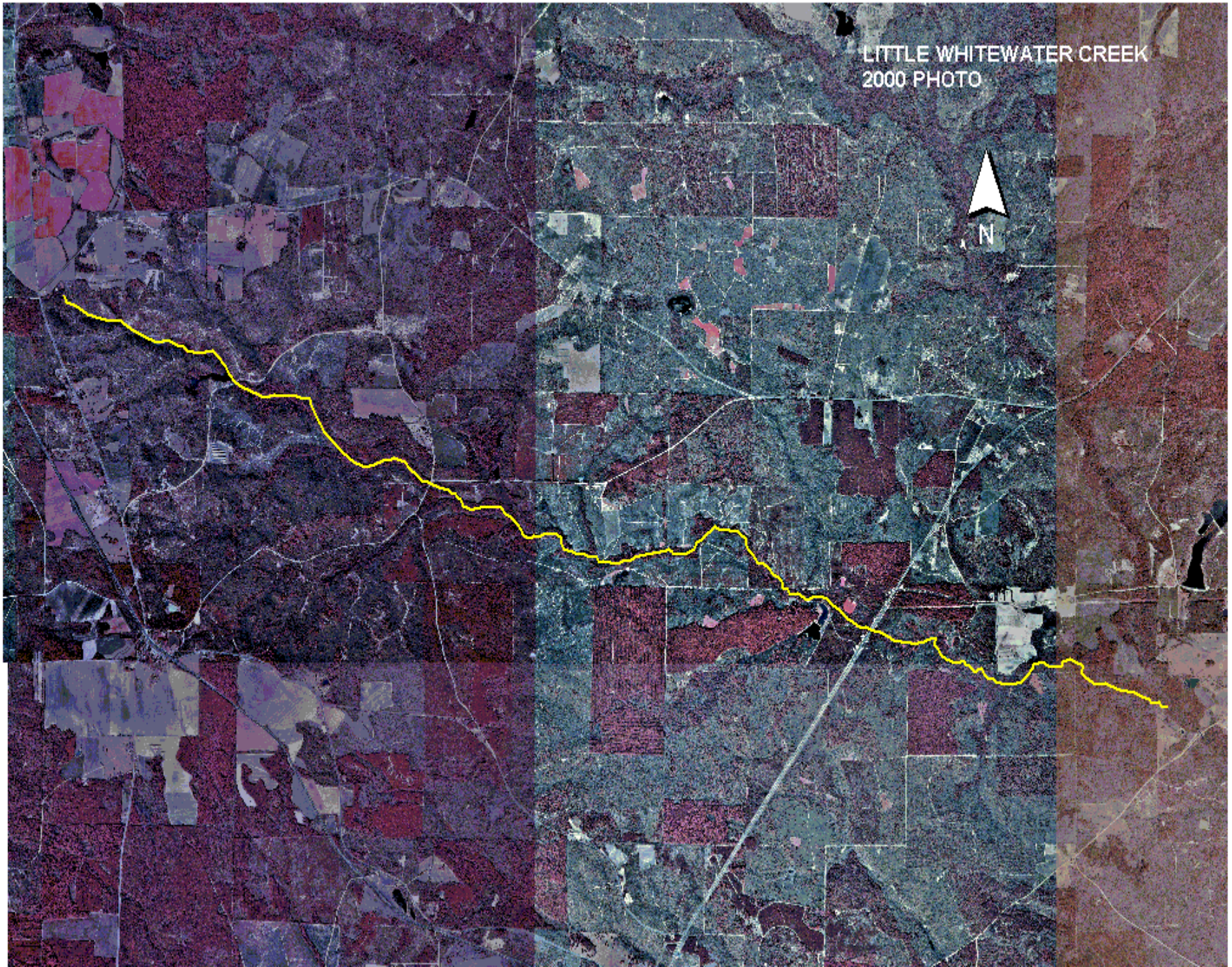
* water, strip mine, transitional and wetlands
Source: Total Maximum Daily Load Evaluation for Twenty-eight Stream Segments in the Flint River Basin For Sediment (Biota Impacted), January 2003; Georgia Department of Natural Resources, Environmental Protection Division

According to the cited source, this land use distribution data is from Landsat Thematic Mapper digital images developed in 1995. More recent, detailed land use data has not been generated. Any current day acreage distribution differences from those presented in the accompanying table are insignificant. Development in this basin over the past ten years has been negligible, consisting almost exclusively of single-family housing.

The state's Flint River Basin Planning performed under direction of the Georgia Department of Natural Resources-Environmental Protection Division every five years is scheduled for additional water quality sampling in 2005. In addition, a locally initiated water basin monitoring effort is underway. The first basin-wide, one-day water sampling event occurred in early November, 2004. There are not any Phase I or Phase II stormwater treatment

[1] Georgia Department of Natural Resources-EPD
[2] Georgia Department of Natural Resources-EPD


LITTLE WHITEWATER CREEK
TIER 2 TMDL IMPLEMENTATION
BIOTA (SEDIMENT)
031300051502
Collection Point
Impaired Segment 9 Miles
Little Whitewater Creek
Henry Cunnington Rd (CR 40)
Averett Rd (CR 50)
State Route 90
Cold Creek Rd (CR 30)
Evergreen Ch Rd (CR 45)
Harbuck Rd (CR 31)
Rustin Lake Rd (CR 11)
State Route 137
0.5 0 0.5 1 Miles


LITTLE WHITEWATER CREEK
2000 PHOTO
N

regulated communities or stormwater utility districts in the watershed. There are not any municipal wells in this sub-basin. The basin is neither in nor part of a water supply watershed. This entire sub-basin is located in Taylor County, which does not have permit issuing authority for land disturbing activity (erosion and sedimentation control ordinance). The county does enforce a Trucking and Logging ordinance regulating silvicultural activities in county roads and rights-of-way. There are not any watershed associations or Adopt-A-Stream groups in the watershed. There is; however, a locally initiated watershed monitoring organization. No Section 319(h) grant projects are known to have been implemented or planned. This impaired creek segment does not discharge directly into the Flint River.

To minimize erosion and stream sedimentation from forestry activities, the Georgia Forestry Commission's 7th District office has a specially trained Water Quality Coordinator to educate the forest community about, and promote the use of, forestry Best Management Practices (BMPs). Loggers and foresters are required by most major timber companies to attend 3-day Master Timber Harvesters' Program training which emphasizes use of forestry BMPs.

The District conducts monthly BMP Assurance examinations to provide "reasonable assurance" that forestry operations comply with BMPs. Active sites are identified through numerous means and inspected in an effort to educate landowners about BMPs, their responsibilities and liabilities concerning state water quality laws, and to provide on-the-ground assistance to loggers or operators before problems occur. No such examinations have occurred in this unit, however.

The GFC also monitors BMP implementation. The 7th District participated in the 4th statewide BMP implementation survey (2002) which collected data on 420 randomly selected sites where forestry activities had occurred within the previous two years. Of the 40,159 acres evaluated across the state, 99.1% were in compliance with BMPs. Of the 226 miles of stream evaluated on 287 sites, 94.2% of the mileage was in compliance with BMPs. As a result of the positive results of the Commission's aggressive program, EPA has identified silviculture as the lowest contribution source of nonpoint pollution. The Commission also investigates and mediates forestry water quality and wetland complaints.

The USDA Conservation Reserve Program reduces soil erosion, reduces sedimentation in streams and lakes, and otherwise improves water quality. It provides financial incentives to encourage farmers to convert erodible cropland and other environmentally sensitive acreage to vegetative cover. The basin has landowner participation in this program.

The Environmental Quality Incentives Program provides assistance to eligible farmers to address soil, water, and related natural resource concerns. The program provides assistance complying with environmental laws, and encourages environmental enhancement. The purposes are achieved through implementation of a conservation plan supplemented with incentive payments to implement land management practices. Financial assistance is very limited, and directed more toward state priorities than local need. There is no such assistance currently in the watershed.

Whitewater Creek

COMPLETE THE FOLLOWING TABLES FOR AND NARRATIVES ABOUT EACH IMPAIRED STREAM IN THE WATERSHED.

STREAM SEGMENT NAME	LOCATION	MILES/AREA	DESIGNATED USE	PS/NS
Whitewater Creek	Headwaters to Little Whitewater	6 miles/35.08 square miles	Fishing	PS

III. SOURCES AND CAUSES OF STREAM SEGMENT IMPAIRMENT LISTED IN TMDLs

After reviewing the TMDLs written for this stream, complete the following tables with **the information found in the TMDLs**. List each parameter for which the stream segment is impaired and the water quality standard violated. See the instructions for the water quality standards. Describe the sources and causes of each violation identified in the TMDLs.

Table 2. SOURCES OF IMPAIRMENT AS INDICATED IN TMDLs

PARAMETER 1	WQ STANDARD	SOURCES OF IMPAIRMENT	NEEDED REDUCTION FROM TMDL
Biota	No degradation to fish community.	Sediment	11%

IV. IDENTIFICATION AND RANKING OF POTENTIAL SOURCES OR CAUSES OF IMPAIRMENT

INVESTIGATE AND EVALUATE the sources of impairment for each parameter listed in Table 2. Write a narrative describing efforts made or procedures used to verify the significance and extent of the sources or causes of each impairment listed in the TMDLs. Include:

- Involvement of stakeholder group
- Field surveys
- Review of land cover data
- Evaluation of sources

Taylor County tax records were researched to identify owners of properties contiguous to the impaired segment. These and “public” stakeholders received a written invitation (copy attached) to a stakeholder meeting to discuss the reported high sediment count, and possible cause(s) and corrective action(s) which might contribute to an improvement in water quality. TMDL background information was included in the invitation. A newspaper notice (The Taylor County News) invited the general public to the same meeting.

As stated in Section II, recent land use acreage distributions in the watershed have not been generated, but site visits and participating stakeholder familiarity with the watershed confirm the reasonable accuracy of the accompanying tabular data. Development in the watershed has been minimal.

In absence of any significant physical development, stakeholders were left to closely study aerial photography to identify possible contributing sources.

To the extent possible, identify sources and quantify the extent of pollution in the stream segment for each of the parameters listed in Table 2 and evaluate the likely impact on the parameter load to the stream. This should follow research performed and described in preceding narrative and should correct or add information to the TMDLs. **The *SOURCES SHOULD BE RANKED*** from those having the most impact to those having the least impact. The estimated extent of contribution can be expressed as the area of the watershed effected, the stream miles effected, or the number of activities contributing to the problem. The magnitude of contribution should be estimated to be large, moderate, small, or negligible.

Table 3. CONCLUSIONS MADE OF POTENTIAL SOURCES OF STREAM SEGMENT IMPAIRMENT

PARAMETER 1	POTENTIAL SOURCES	ESTIMATED EXTENT OF CONTRIBUTION	ESTIMATED MAGNITUDE OF CONTRIBUTION	COMMENTS
Biota (sediment)	“Flood of ‘94”	Entire stream segment	Large	Legacy sediment – sandy soils
Biota (sediment)	Unpaved Roads	Entire stream segment	Large	Sandy soils
Biota (sediment)	Silviculture	Entire stream segment	Moderate	Sandy soils
Biota (sediment)	Agriculture	Entire stream segment	Small	Sandy soils, limited activity

V. STAKEHOLDERS

PUBLIC INVOLVEMENT AND THE ACTIVE PARTICIPATION OF STAKEHOLDERS is essential to the process of preparing TMDL implementation plans and improving water quality. Stakeholders can provide valuable information and data regarding their community, impaired water bodies, potential causes of impairments, and management practices and activities which may be employed to reduce the impacts of the causes of impairment.
Describe outreach activities to advise and engage stakeholders in the TMDL implementation plan preparation process. Describe the stakeholder group employed or formed to address the impaired segments in the watershed. Summarize the results of the number of attendees and meetings and describe major findings, recommendations, and approvals.

On August 30, 2004, a meeting was held in Butler at City Hall to address the listing of Whitewater Creek on the Federal 303(d) List for Biota (sediment). Twenty-four stakeholders, including landowners, private sector and public officials, were invited to attend for the purpose of discussing possible sources of reported contamination. Three stakeholders were in attendance. During the meeting, several issues concerning possible contributors to the high sediment count were identified:

- Flood of '94
- Artesian Well
- Maintenance of unpaved county roads – sandy soil contributes to erosion and sediment
    - Many ditches in basin are silt laden
    - Turnouts have been employed to limit the amount of sediment deposited in creek
- Catch basins on Ed Davis road were not properly maintained
- Samples were taken at an unpaved road
- Timber was harvested during the sample collection year

Site photographs are in rear of document.

List the watershed or advisory committee members of the stakeholder group for this segment in the following table.

Table 4. COMMITTEE MEMBERS

NAME/ORG	ADDRESS	CITY	STATE	ZIP	PHONE	E-MAIL
James M & Thomas S Carroll, landowner	461 Kelly Drive	Marietta	GA	30066	478-862-9671	
Harold Heath, Butler City Council	P.O. Box 476	Butler	GA	31006	478-862-5435	
Fred Sackett, landowner		Butler	GA	31006	478-862-5120	

In Appendix A, list the names, addresses, telephone numbers, and e-mail addresses for local governments, agricultural or commercial forestry organizations, significant landholders, businesses and industries, and local organizations including environmental groups and individuals with a major interest in this watershed.

VI. MANAGEMENT MEASURES AND ACTIVITIES

Describe any management measures or activities that have been put into place or will be put into place including regulatory or voluntary actions or other controls by governments or individuals that specifically apply to the pollutant that will help achieve water quality standards. Include who will be responsible for the measure, how it will be funded, the status, the date it will be or was initiated, and a short description of how effective the measure is or will be.

Table 5. MANAGEMENT MEASURES AND ACTIVITIES

GENERAL MEASURES APPLICABLE TO ALL PARAMETERS

MEASURE	RESPONSIBILITY	DESCRIPTION	SOURCE OF FUNDING	STATUS	ENACTED/ IMPLEMENTED	EFFECTIVENESS (Very, Moderate, Weak)
Federal Clean Water Act Section 404 (Ag and Forestry)	EPA (situations involving forestry are normally referred to GFC to determine compliance)	Requires agricultural and silvicultural practices to adhere to BMPs and 15 baseline provisions for road construction/maintenance in and across waters of the U.S. to be exempted from permitting process.	Farmers Timber Harvesters	Current	June 6, 1998	EPA identifies silviculture as the lowest contribution source of nonpoint pollution
Trucking and Logging Ordinance	Taylor County	Regulates silvicultural activity on county roadways, and rights-of-way	Timber Harvesters	Current		EPA identifies silviculture as the lowest contribution source of nonpoint pollution
Memo to the Field: Application of BMPs to mechanical silvicultural site preparation activities for establishment of pine plantations in SE. (Silviculture)	EPA/ US Army Corps of Engineers - (cases normally referred to GFC for initial determination)	Identifies certain bottomland hardwood wetlands that should be subject to permitting if converting to pine plantations.	Landowner	Current	November 1995	
GA Growth Planning Act (OCGA 12-2-8)	GA DNR, Department of Community Affairs, and local units of government	Authorized GA DNR to develop minimum planning standards local jurisdictions could adopt and enforce (river corridors, groundwater recharge areas, and wetlands) Silvicultural activities may be exempted from permitting provided activity complies with BMPs	Landowners Developers	Current	1991	

Georgia Forestry Commission Monthly BMP Assurance Examination	Georgia Forestry Commission (matters involving enforcement are generally referred to GA EPD)	To document "reasonable assurance" water quality will be proactively protected during silvicultural operations, GCF will offer monthly BMP assurance examination of active sites. Sites within watersheds of biota (sediment) impaired streams will be given priority for examination.	Georgia Forestry Commission	Current	1/1/03	EPA identifies silviculture as the lowest contribution source of nonpoint pollution
Georgia Water Quality Control Act (OCGA 12-5-20)	GA DNR EPD	Makes it unlawful to discharge excessive pollutants (sediments, nutrients, pesticides, animal waste, etc.) into waters of the State in amounts harmful to public health, safety, or welfare, or to animals, birds, or aquatic life or the physical destruction of stream habitats.	Developers	Current	1964	
Georgia's Best Management Practices	Georgia Forestry Commission (matters involving enforcement are generally referred to GA EPD)	Inform landowners, foresters, timber buyers, loggers, site preparation and reforestation contractors, et al, about commonsense, economical and effective practices to minimize nonpoint source & thermal pollution.	Timber Harvesters	Current	1989, 1997	EPA identifies silviculture as the lowest contribution source of nonpoint pollution
Conservation Reserve Program (CRP)	Farmers	Encourages farmers to convert highly erodible and other cropland or other environmentally sensitive acreage to vegetative cover.	Federal	Current		Very
Environmental Quality Incentives Program (EQIP)	Farmers	Provides technical, educational, and financial assistance to eligible farmers to address soil, water and related natural resource concerns through a cost-share program to implement eligible structural or vegetative practices such as terraces, filter strips, tree planting and permanent wildlife habitat.	Federal Commodity Credit Corporation	Current		
Ordinance Revisions	Local Government	Review current E&S control ordinance and modify as appropriate. Include certification program with requirements for pollution prevention at construction site through preparation of an Erosion, Sedimentation and Pollution Control Plan to address trash, construction debris, leaking vehicles, storage of chemicals, etc.	State, Local Government	Proposed		Changes are pro-posed for state's erosion and sedi-ment control pro-gram. Channel protection and con-servation subdivision ordinances will provide further guidelines for construction activity.

MEASURES APPLICABLE TO INDIVIDUAL PARAMETERS

PARA-METER 1	MEASURE	RESPONSIBILITY	DESCRIPTION	SOURCE OF FUNDING	STATUS	ENACTED/ IMPLEMENT-ED	EFFECTIVENESS (Very, Moderate, Weak)
Biota (sediment)	Georgia Water Quality Control Act (OCGA 12-5-20)	Local government	Proper maintenance of unpaved roads for erosion control	Local	Ongoing		Weak to moderate – sandy soils
Biota (sediment)	Silviculture BMPs	Timber harvesters	Reduce erosion and sedimentation resulting from forest-related activity	Local	Ongoing		Weak to moderate – sandy soils
Biota (sediment)	Agriculture BMPs	Farmers	Reduce erosion and sedimentation resulting from agriculture activity	Local	Ongoing		Weak to moderate – sandy soils

VII. MONITORING PLAN

The purposes of monitoring are to obtain more data, to determine the sources of pollution, to describe baseline conditions, and to evaluate the effects of management and activities on water quality. Describe any sampling activities or other surveys - active, planned or proposed - and their intended purpose. Reference the development and submission of a Sample Quality and Assurance Plan (SQAP) if monitoring for delisting purposes.

Table 6. MONITORING PLAN

PARAMETER(S) TO BE MONITORED	ORGANIZATION	STATUS (CURRENT, PROPOSED, PLANNED)	TIME FRAME		PURPOSE (If for delisting, date of SQAP submission)
			START	END	
Biota (Sediment)	Georgia DNR-EPD	Planned	2005	2005	Flint River Basin Planning
Biota (Sediment)	Georgia DNR-EPD	Planned	2010	2010	Flint River Basin Planning

VIII. PLANNED OUTREACH FOR IMPLEMENTATION

List and describe outreach activities which will be conducted to support this plan and the implementation of it.

Table 7. PLANNED OUTREACH

RESPONSIBILTY	DESCRIPTION	AUDIENCE	DATE
Georgia Forestry Commission	Monthly BMP Assurance Examination (biota impaired streams will be given priority)	Timber Harvesters	Continuous
Extension Service, Natural Resources Conservation Service	Stress importance of implementing agriculture BMPs	Farmers	Continuous

IX. MILESTONES/ MEASURES OF PROGESS OF BMPs AND OUTREACH

This table will be used to **track and report progress of management measures including BMPs and outreach**. Record milestone dates for:

- accomplishment of management practices or activities
- outreach activities
- installation of BMPs

to attain water quality standards. Comment on the effectiveness of the management measure, how much support the measure was given by the community, what was learned, how the measure might be improved in the future, and any other observations made. This table can be "pulled out" of this template and used to report and track progress.

Table 8. MILESTONES

MANAGEMENT MEASURE	RESPONSIBLE ORGANIZATIONS	STATUS		COMMENT
		PROPOSED	INSTALLED	
Modify unpaved road maintenance practices	Local government	2005-07		
Silviculture BMPs	Georgia Forestry Commission, Timber harvesters	Ongoing		
Agriculture BMPs	Extension Service, Natural Resources Conservation Service	Ongoing		

Prepared By:	Gerald Mixon				
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E-mail:	gmixon@middleflintrdc.org				
Date Submitted to EPD:	December 2004			Revision:	0

APPENDIX A.

STAKEHOLDERS

List the names, addresses, telephone numbers, and e-mail addresses for local governments, agricultural or commercial forestry organizations, significant landholders, businesses and industries, and local organizations including environmental groups and individuals with a major interest in this watershed.

NAME/ORG	ADDRESS	CITY	STATE	ZIP	PHONE	E-MAIL
Carey Etals Whitley C/O Ruby Whitley L/E	Route 1 Box 99	Mauk	GA	31058		
David Lynn & Martha Black	532 Pelican Bay Drive	Daytona Beach	FL	32119		
Mead Coated Board, Inc	P O Box 558	Waverly Hall	GA	31831		
Forum, Inc.	3203 Shenandoah Drive	Phenix City	AL	36867		
Gary W Carnes	P O Box 1877	Dundee	FL	33838		
Carter B Wilson	2998 Gravel Springs Road	Buford	GA	30519		
James M & Thomas S Carroll	461 Kelly Drive	Marietta	GA	30066		
Robert Lee Bell III	P O Box 575	Reynolds	GA	31076		
Bobby L Moore C/O B & M Construction	P O Box 5468	Lakeland	FL	33807		
Walter Snipes	Route 2 Box 309	Butler	GA	31006		
James Sackett	P O Box 445	Stone Mountain	GA	30086		
Frank Hobbs	Route 1 Box 309-A	Butler	GA	31006		
Sidney Albritton, Chairman, Taylor County Board of Commissioners	P O Box 278	Butler	GA	31006		
Taylor County Farm Bureau	512 West Talbot	Reynolds	GA	31076		
Lenda Taunton, Taylor County Board of Commissioners	P O Box 278	Butler	GA	31006		
Wade Green, Taylor County Extension Service	P O Box 397	Butler	GA	31006		
Dorothy Swearingen, Taylor County Health	P O Box 459	Butler	GA	31006		

Dept.						
Ray Jones USDA District Center, District Conservationist	102 Church Street	Byron	GA	31008		
Carol Lowell, Chief Ranger, Taylor County Forestry Unit	Route 2 Box 324	Butler	GA	31006		
Mr. Russell Toning, Regional Representative	2700 Palmyra Road	Albany	GA	31707-1845		
Susan Reyher, Regional Health Department, Environmental Health	222 Pine Avenue, Room 420	Albany	GA	31701		
Phil Porter & Robbie Hughes, Georgia Forestry Commission	243 U S Highway North	Americus	GA	31709		
Drew Marczark, The Timber Company	P O Box 1069	Watkinsville	GA	30677		
Janet Moehle, Field Representative, The Georgia Conservancy	18 North Main Street	Moultrie	GA	31768		

APPENDIX B.

UPDATES TO THIS PLAN

Describe any updates made to this plan. Include the date, section or table updated, and a summary of what was changed and why.

WHITEWATER CREEK

Heavy sediment flow into tributary

Heavy road sediment on Cold Creek Rd

Road shoulder erosion

Heavy sediment flow into turnout

Numerous turnouts in watershed

Road and bank erosion